

CLAIMS

1. A biological process for decontaminating mycotoxins in a liquid dietary medium, characterized in that it comprises at least the following steps:

- adsorbing at least a part of the mycotoxins, which are likely to be present in the liquid dietary medium to be decontaminated, by bringing said medium into contact with insoluble plant fibers, and
- removing said fibers on which the mycotoxins are absorbed.

2. The process as claimed in claim 1, characterized in that the insoluble plant fibers are fibers derived from:

- dietary plants selected from cereals, leguminosae, culinary plants and fruits including tropical fruits;
- plants derived from the paper industry and selected from trees, sugarcane, bamboo and cereal straw.

3. The process as claimed in claim 2, characterized in that the fibers derived from dietary plants are fibers derived from cereals and are selected from wheat, barley, oat, corn, millet, rice, rye and sorghum fibers and their malted equivalents.

4. The process as claimed in claim 2, characterized in that the insoluble plant fibers are selected from fibers derived from apples, pears, grape berries, lupin and soya bean seeds, tomatoes, peas and coffee.

5. The process as claimed in any one of the preceding claims, characterized in that the fibers are selected from micronized fibers.

6. The process as claimed in claim 5, characterized in that the fibers are present in the form of

microparticles at least 90% of the total mass of which has a size of less than or equal to 700 μm .

7. The process as claimed in claim 6, characterized in that the fibers are present in the form of microparticles at least 90% of the total mass of which has a size of less than or equal to 200 μm .

8. The process as claimed in any one of the preceding claims, characterized in that it additionally comprises a preliminary step during which the fibers are hydrated.

9. The process as claimed in any one of the preceding claims, characterized in that the quantity of plant fibers introduced into the liquid medium to be decontaminated is between 0.1 and 20% by weight per liter of medium.

10. The process as claimed in any one of the preceding claims, characterized in that the dietary medium is brought into contact with the plant fibers for a period of between a few seconds and 90 minutes.

11. The process as claimed in any one of the preceding claims, characterized in that the dietary medium is brought into contact with the plant fibers at a pH of between 1.5 and 7.

12. The process as claimed in any one of the preceding claims, characterized in that the medium is maintained at a temperature of between 7 and 80°C during the whole of the period of contact.

13. The process as claimed in any one of the preceding claims, characterized in that the medium is selected from beer, mixtures of malt and water and the mash of

the brewing processes, wine, coffee, fruit juices, milk and glucose syrups.

14. The process as claimed in any one of the preceding claims, characterized in that the fibers are removed by filtration at the end of the period of contact.

15. The process as claimed in any one of the preceding claims, characterized in that the steps of bringing the liquid dietary medium to be decontaminated into contact with the insoluble plant fibers, on the one hand, and, on the other hand, of removing said fibers on which the mycotoxins are adsorbed are carried out simultaneously.

16. The process as claimed in claim 15, characterized in that the step of removing the fibers is a step of filtration and in that the insoluble plant fibers form an integral part of a filtration system.

17. The use of the process as defined in any one of claims 1 to 16 for detoxifying the beer during a brewing process, with said brewing process involving at least one filtration operation.

18. A brewing process comprising at least one step of mashing and at least one step of fermenting a wort, characterized in that it additionally comprises at least one step of mycotoxin decontamination using the process as defined in any one of claims 1 to 16, with said decontamination step taking place simultaneously with the mashing step and/or after the step of fermenting and/or maturing the wort.

19. The process as claimed in claim 18, characterized in that the decontamination step is carried out simultaneously with the mashing step by bringing a mixture of ground malt and water into contact with insoluble plant fibers, with said fibers on which the

mycotoxins are then adsorbed being removed by the step of filtering the mash at the end of the mashing.

20. The process as claimed in claim 19, characterized in that the plant fibers are introduced at the rate of from 0.5 to 20% by weight based on the weight of malt.

21. The process as claimed in claim 14, characterized in that the step of bringing the liquid medium to be decontaminated into contact is carried out before the step of filtering a wort which is fermented and, where appropriate, matured, by bringing this wort into contact with insoluble plant fibers, with said fibers on which the mycotoxins are then adsorbed being removed by the step of filtering the fermented wort.

22. The process as claimed in claim 21, characterized in that the plant fibers are introduced into the fermented wort at the rate of from 0.05 to 5% by weight based on the total weight of the wort.

23. A dietary product which is at least partially decontaminated of mycotoxins, characterized in that it is obtained by implementing the decontamination process as defined in any one of claims 1 to 16.

24. A beer which is at least partially decontaminated of mycotoxins, characterized in that it is obtained by implementing the brewing process as defined in any one of claims 18 to 22.